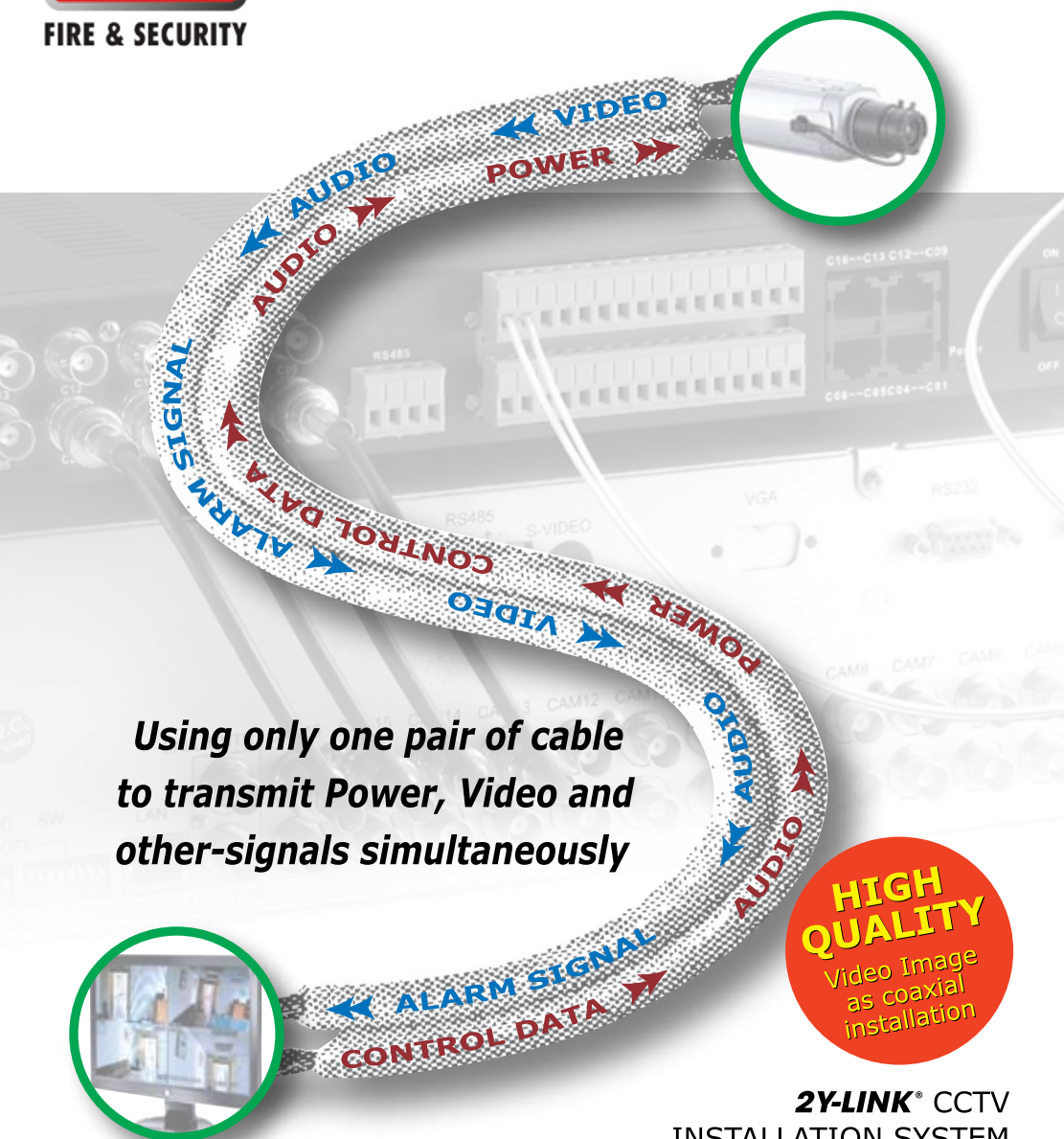




PATENTED TWO-WIRE TECHNOLOGY **2Y-LINK®**



*Using only one pair of cable
to transmit Power, Video and
other-signals simultaneously*

**HIGH
QUALITY**
Video Image
as coaxial
installation

2Y-LINK® CCTV
INSTALLATION SYSTEM

Product Guide





2Y-LINK® INTRODUCTION 1

CABLES SUITABLE FOR 2Y-LINK® 2

TYPICAL INSTALLATION 3-4

ADVANTAGES 5

2Y-LINK® PRODUCTS

Power & Video Series



6-9

- 16-Channel System
- 4-Channel System
- Single Channel System
- Smart System

Power, Video & Data Series



10

- 4-Channel System
- Single Channel System

Power, Video & Audio Series



11

- 4-Channel System
- Single Channel System

Multi-Function Series



12-14

(Power, Video, Two-Way Audio, Control Data and Security/ Fire Alarm Signals)

- Single Channel
- Multi-function System
- 12-Channel
- Multi-function System



PRODUCT SELECTION GUIDE 15-16

ACCESSORIES FOR EASY INSTALLATION 17-18

CUSTOM-DESIGNED PRODUCTS 19

2Y-LINK® INTRODUCTION

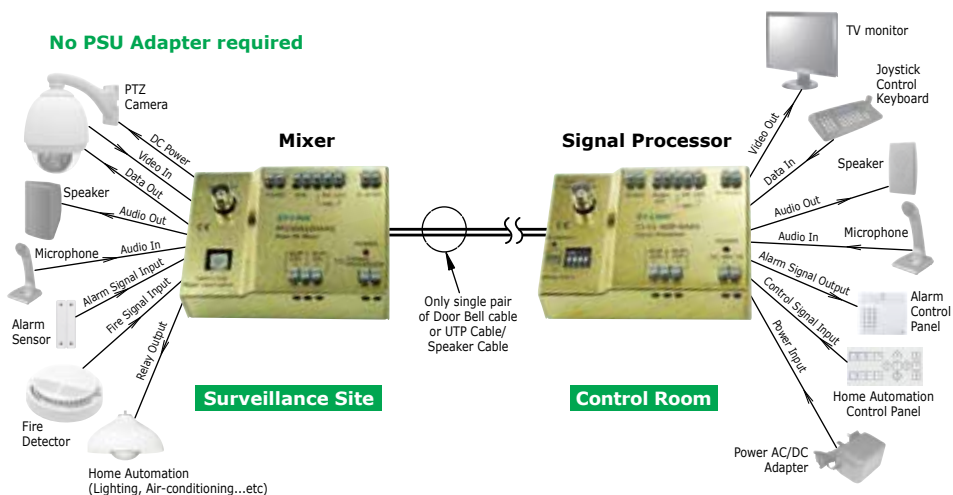
General

2Y-LINK® is a new CCTV installation system developed with patented two-wire technology. It uses only one pair of wires to supply power to camera and at the same time transmit video, audio and other signals in the same pair of wires between surveillance site and control room. The transmission distance can be up to 2000m (6600 ft), depending on the choice of **2Y-LINK®** models.

The **2Y-LINK®** CCTV installation system is consisted of the following devices:

- (1) **Mixer:** It is a compact, weather-proof device installed close to each camera of surveillance site to get DC power and receive signals (like audio signal, control data etc...) from control room and at the same time, transmit video and other signals back to control room in the same pair of wires.
- (2) **Signal Processor:** Installed close to DVR/monitor in control room, it supplies power and transmits control data, audio signal through a single pair of wires to each camera in surveillance site and at the same time receives, through same pair of wires, video and other signals continuously from camera and channels them to the DVR/monitor/ applicable equipment. Single channel, 4 channels, 12 channels and 16 channels signal processors are available.
- (3) **DC power supply:** It is either built inside or connected externally to **Signal Processor** in the control room to supply power to cameras/**Mixers** of the CCTV installation.

The following diagram shows a full function **2Y-LINK®** CCTV installation system, using just one pair of cables. For economical use, different models of Mixers and Signal Processors with specific functions are available for selection by users according to their requirement.

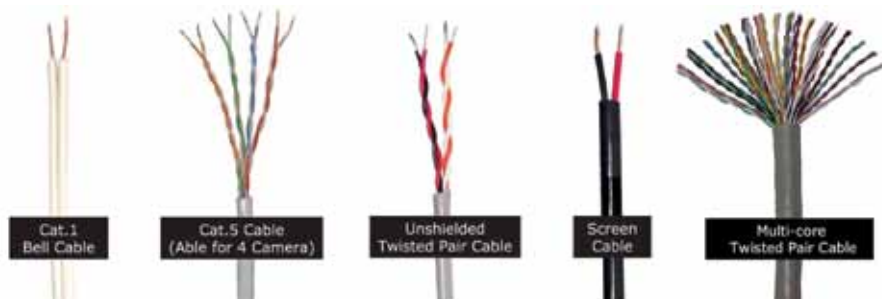


Note: please refer to the section of Product Selection Guide for details

CABLE SUITABLE FOR 2Y-LINK®

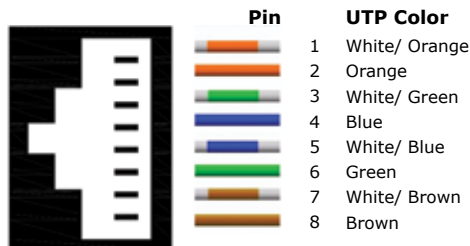
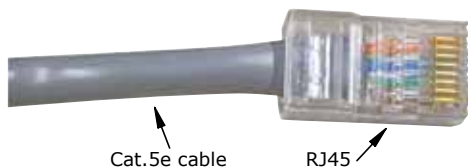
Any pair of wires can be used for 2Y-LINK® CCTV installation system either twisted or untwisted, shielded or unshielded :

- A. One Cat.5e unshielded or shielded cable can connect four cameras, without interference with each other
- B. AWG18 to AWG 24 Bell cable
- C. Multi-core wire cable consists of several pairs of twisted or untwisted, shielded or unshielded cable, like telephone cable, can be used without interference with each other
- D. Different cable types can be used in mixed combination to achieve easy installation and cost reduction
- E. The following photo shows some typical types of cables used in **2Y-LINK®** CCTV Installations:



Wire gauge : 18-24AWG

For Cat.5 cable wiring connection, RJ45 connector should be used according to usual computer network standard **TIA/EIA-568-B** as below:



Note: Cat.5 or Cat.5e UTP

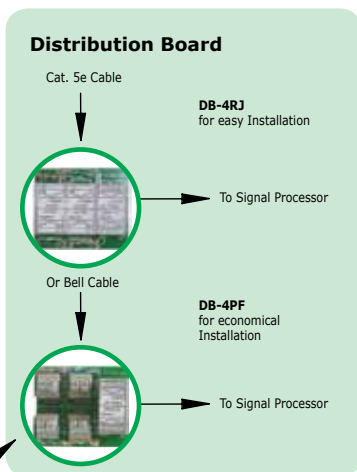
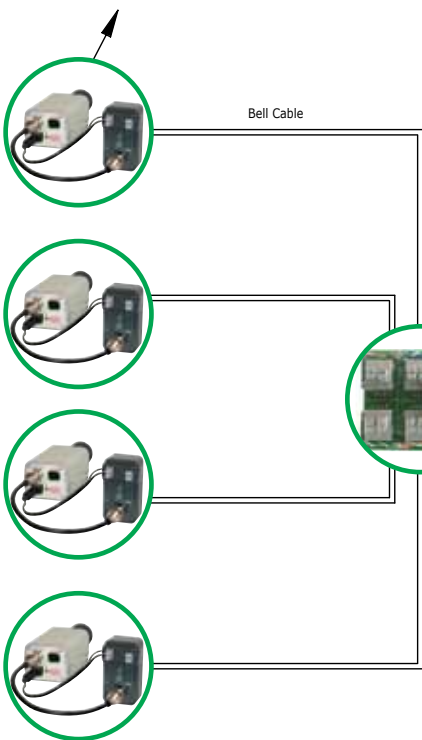
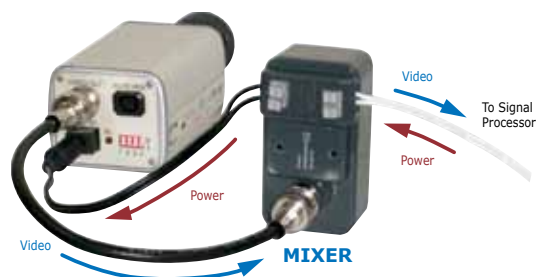
To achieve best performance of the **2Y-LINK®** System, two main electrical characteristics must be noted as follows:

1. Characteristic impedance @100MHz 100±15 Ohm
2. DC Loop resistance ≤20 Ohm/ 100M (330ft)

TYPICAL INSTALLATION

TYPICAL ECONOMICAL 2Y-LINK® CCTV INSTALLATION SYSTEM

Power to Camera and send Video Signal back to Signal Processor. **At camera end, no A/C power point & adaptor needed**



One Cat.5e cable for 4 cameras

CONTROL DATA AUDIO VIDEO POWER ALARM SIGNAL

ONE PAIR
Bell Cable for
Video & Power
No separate power wire

Monitor



DVR



Video & Power - RJ45 Socket
(4 Cameras per socket)



Signal Processor



Rear Panel

110-230V
A/C Power Cord



A/C 110V/
A/C 230V

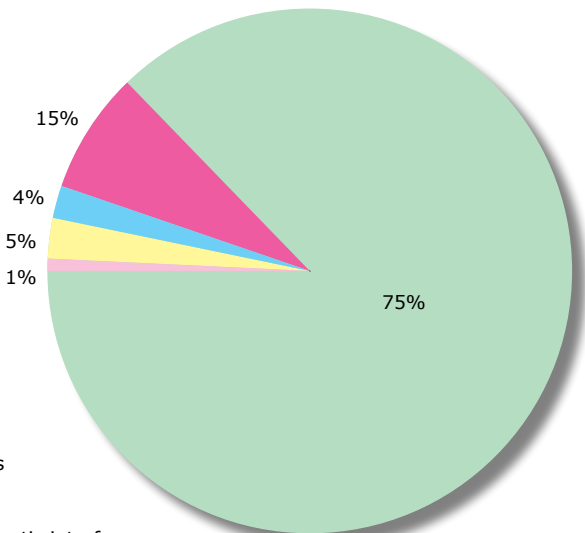


Front Panel

ADVANTAGES

LEEDS' 2Y-LINK® PRODUCTS

- Power & Video Series
- Multi-function Series
- Power Video & Audio Series
- Custom-designed Products
- Power, Video & Data Series



1. **High-quality**, real time video as coaxial installation.
2. **GOOD immunity** to electromagnetic interference.
3. **NO power points and adapters** close to camera are required.
4. **NO polarity** restriction on the connection of two-wire.
5. Bell cable is more flexible and easier to install than coaxial cable, with **GREAT SAVINGS in labor and cable cost**.
6. **A single Cat.5e/Cat.6 cable** (with 4 pairs of UTP wires inside) can **support 4 cameras** with both video and power transmission, achieving great cost reduction in cable cost and installation labour.
7. **Combination of Cat.5e and Bell cable** is enhanced with custom-made accessories, achieving greater flexibility and further saving in cable and installation costs.
8. **LONGER transmission** distance, up to 2000 meters (6600 ft).
9. Camera rating can be **up to 3A for PTZ camera**
10. **Video, Power, Two-way Audio, Control Data and Security/ Fire Alarm Signals** can be transmitted together through the same pair of wires, providing more flexible and convenient installation options in difficult and special applications.
11. **Enable** non-stop power for cameras with **optional backup UPS** located in control room.

2Y-LINK® PRODUCTS

Power & Video Series

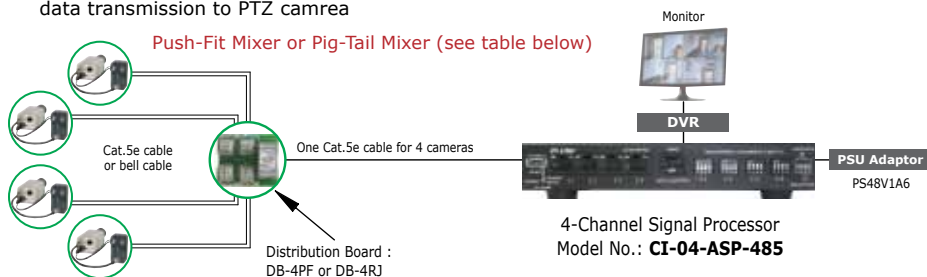
POWER AND VIDEO SERIES



4-Channel System - CI-04-ASP-485

(support 4 cameras, up to 8W each, total output 32W)

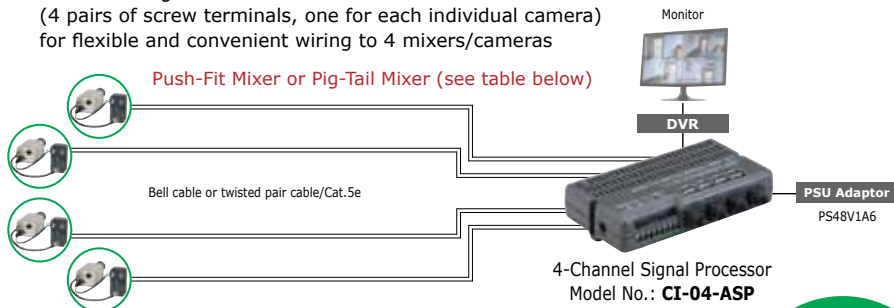
- 4-Channel Signal Processor with both RJ45(8P8C) sockets and screw terminals for flexible and convenient wiring to 4 mixers/cameras
- Special designed RJ45 socket for connecting 4 cameras through one Cat.5e cable
- RS485 data ports (RJ45 sockets and screw terminals) are available for data transmission to PTZ camera



4-Channel System - CI-04-ASP

(support 4 cameras, up to 8W each, total output 32W)

- 4-Channel Signal Processor with screw terminals (4 pairs of screw terminals, one for each individual camera) for flexible and convenient wiring to 4 mixers/cameras



Mixers can be used

Pig-Tail Mixer (up to 8W)		Push-Fit Mixer (up to 8W)	
Model No.:	Description :	Model No.:	Description :
PT068A12	12V DC, Up to 500m/ 1650 ft	PF068A12	12V DC, Up to 500m/ 1650 ft
PT068B12	12V DC, 500-1000m/ 1650-3300 ft	PF068B12	12V DC, 500-1000m/ 1650-3300 ft
PT068C12	1000-1500m/ 3300-4950 ft	PF068C12	1000-1500m/ 3300-4950 ft
		PF068A24	24V DC, Up to 500m/ 1650 ft
		PF068B24	24V DC, 500-1000m/ 1650-3300 ft

* Power distance, please refer to User Manual

ONE PAIR
Bell Cable for
Video & Power
No separate power wire

2Y-LINK® PRODUCTS

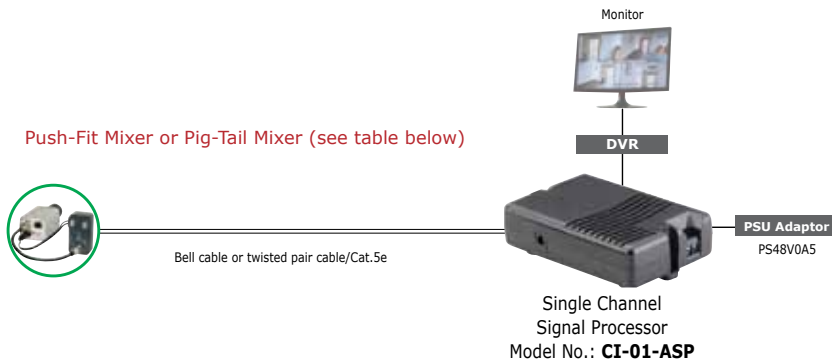
Power & Video Series

POWER AND VIDEO SERIES



Single Channel System - CI-01-ASP (support a camera, up to 8W)

- Single Channel Signal Processor with screw terminals for a mixer/camera



Mixers can be used			
Pig-Tail Mixer (up to 8W)		Push-Fit Mixer (up to 8W)	
Model No.:	Description :	Model No.:	Description :
PT068A12	12V DC, Up to 500m/ 1650 ft	PF068A12	12V DC, Up to 500m/ 1650 ft
PT068B12	12V DC, 500-1000m/ 1650-3300 ft	PF068B12	12V DC, 500-1000m/ 1650-3300 ft
PT068C12	1000-1500m/ 3300-4950 ft	PF068C12	1000-1500m/ 3300-4950 ft
		PF068A24	24V DC, Up to 500m/ 1650 ft
		PF068B24	24V DC, 500-1000m/ 1650-3300 ft

* Power distance, please refer to User Manual



2Y-LINK® PRODUCTS

Power & Video Series

POWER AND VIDEO SERIES



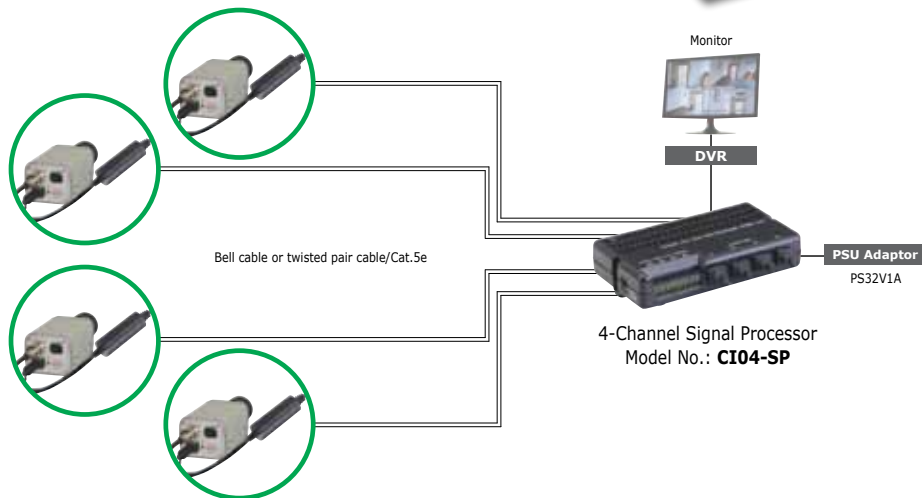
SMART System - CI04-SP

(in Kit set for 4 cameras, up to 4W each, total output 16W)

- 4-Channel Signal Processor with screw terminals (4 pairs of screw terminals, one for each individual camera) for flexible and convenient wiring to 4 mixers/cameras



Push-Fit Mixer or Pig-Tail Mixer (see table below)



CI04-SP Kit Component

Model No.:	Description :	Qty
CI04-SP	4-channel Signal Processor	1
UC-MX12V	Mixer, 12V DC/ 4W , Up to 500m/ 1650 ft	4
PS32V1A	PSU Adaptor	1

* Power distance, please refer to User Manual

2Y-LINK® PRODUCTS

Power, Video & Data Series

POWER, VIDEO AND DATA SERIES



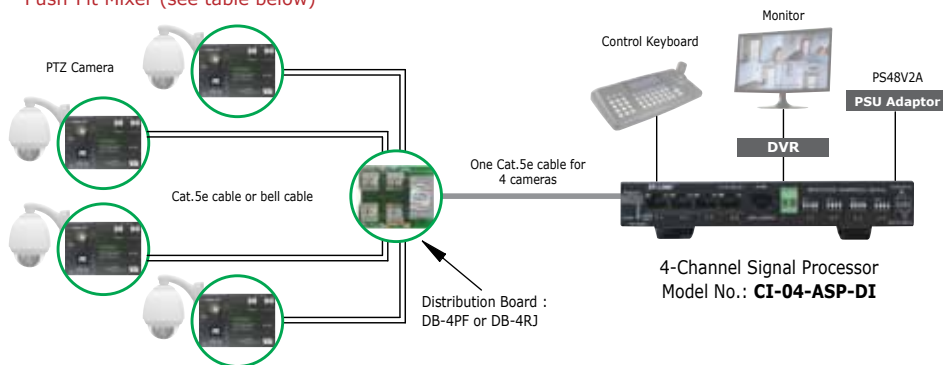
4-Channel System - CI-04-ASP-DI

(support 4 PTZ cameras, up to 18W each, total output 45W*)

- One pair of Cable UTP/Door Bell Cable supplies DC power for Camera and sending control data Signal from Signal Processor and receiving Video Signal from Mixer
- Special designed RJ45 sockets, each for connecting 4 cameras through one Cat.5e cable

* The total output is derived from PS48V2A

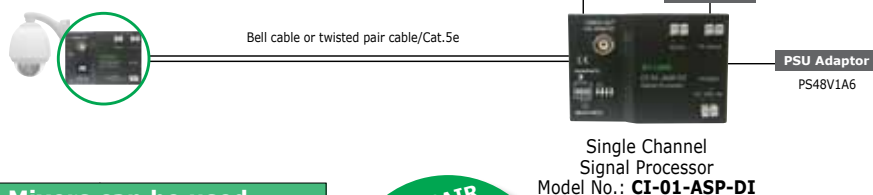
Push-Fit Mixer (see table below)



Single-Channel System - CI-01-ASP-DI (support a PTZ camera, up to 18W)

- One pair of Cable UTP/Door Bell Cable supplies DC power for Camera and sending control data Signal from Signal Processor and receiving Video Signal from Mixer

Push-Fit Mixer or Pig-Tail Mixer (see table below)



Mixers can be used

Push-Fit Mixer (up to 18W)

Model No.:	Description :
PF150A12D	12V DC, Up to 500m/ 1650 ft

* Power distance, please refer to User Manual

ONE PAIR
Bell Cable
for Video, Power
& Data
No separate power wire

2Y-LINK® PRODUCTS

Power, Video & Audio Series

POWER, VIDEO AND AUDIO SERIES



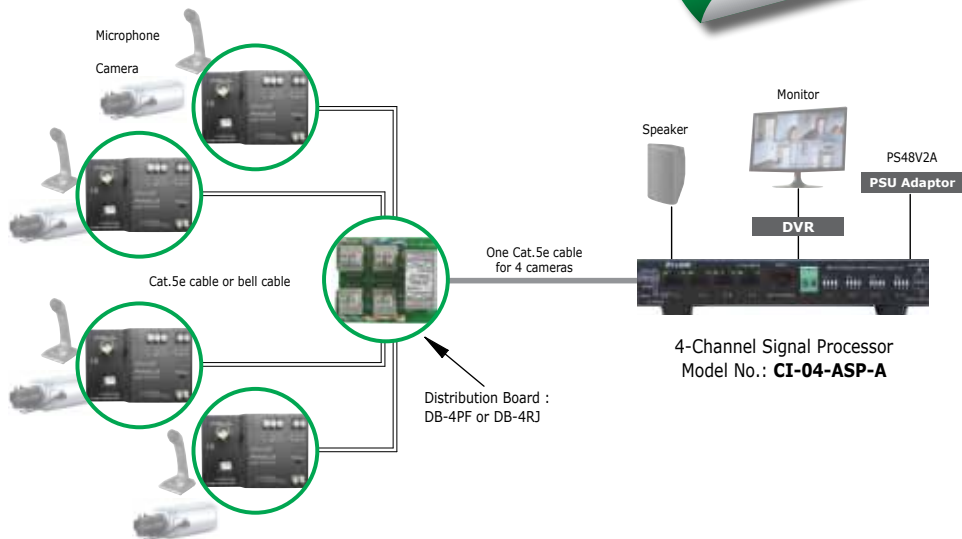
4-Channel System - CI-04-ASP-A

(support 4 cameras and 4 audio inputs, up to 8W each, total output 32W)

- One pair of UTP/Door Bell Cable supplies DC power for Camera from Signal Processor and receiving Video Signal and Audio Signal from Mixer
- Special designed RJ45 socket for connecting 4 cameras through one Cat.5e cable



Push-Fit Mixer (see table below)



Mixers can be used

Push-Fit Mixer (up to 8W)

Model No.:	Description :
PF068A12A	12V DC, Up to 500m/ 1650 ft

* Power distance, please refer to User Manual

2Y-LINK® PRODUCTS

Multi-Function Series

MULTI-FUNCTION SERIES

(POWER, VIDEO, TWO-WAY AUDIO, CONTROL DATA AND TWO-WAY SECURITY/ FIRE ALARM SIGNALS)

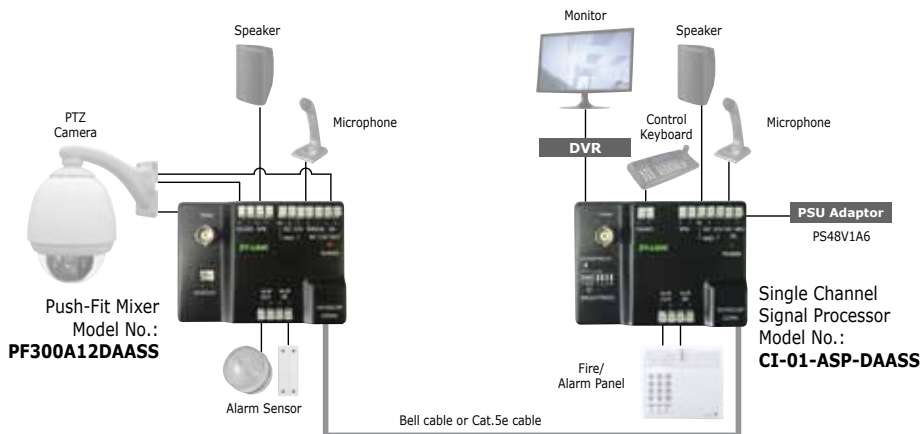


Single Channel Multi-Function System

- CI-01-ASP-DAASS (in kit set for a camera, up to 36W)

- Single Channel Signal Processor come with both RJ45 (8P8C) sockets and push-fit terminals for convenient wiring to a mixer/camera
- Maximum power output to camera up to 36W
- Support multifunctional signals transmission
 - Power to Camera
 - Control Data to PTZ Camera
 - Video and Audio Signal from Mixer to Signal Processor with output to DVR for recording
 - Two-way fire/alarm trigger from Mixer to Signal Processor and vice versa

NEW 2012
ONE PAIR
Bell Cable for Video,
Power, Two-way Audio,
Control Data &
Security Fire/ Alarm Signals
No separate power wire



CI-01-ASP-DAAS Kit Component

Model No.:	Description :	Qty
CI-01-ASP-DAASS	Single Channel Signal Processor	1
PF300A12DAASS	Power, Video, Control Data , Two-way Audio & Two-way Alarm Signals 12V DC, Up to 300m/ 990 ft	1
PS48V1A6	PSU Adaptor	1

* Power distance, please refer to User Manual

2Y-LINK® PRODUCTS Multi-Function Series

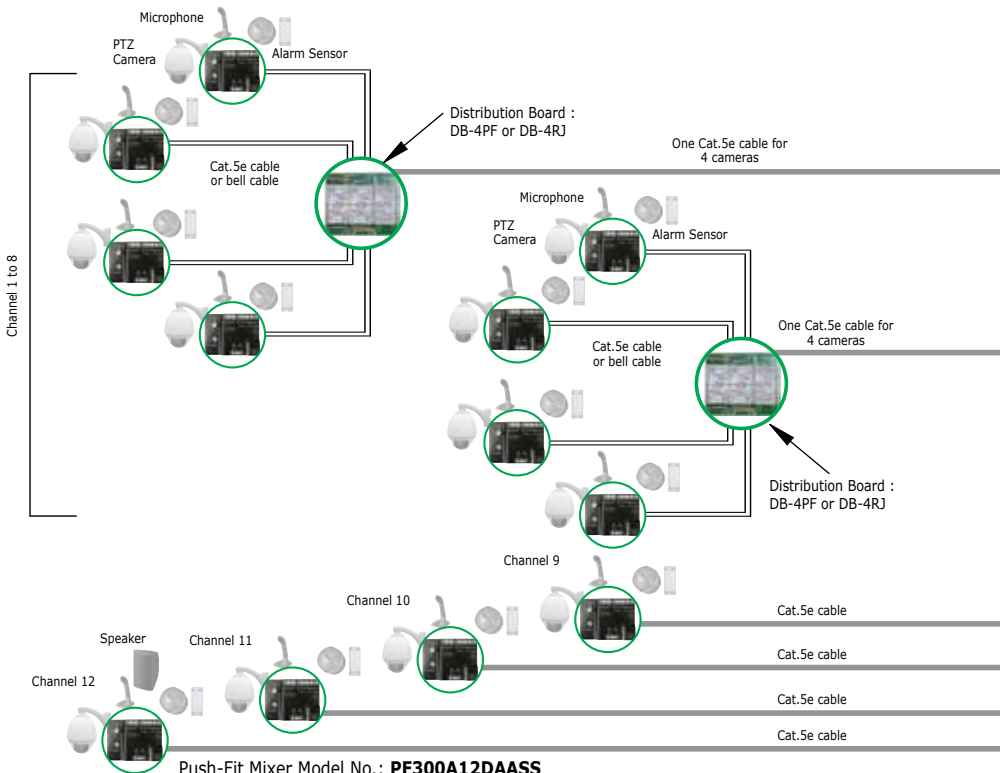
MULTI-FUNCTION SERIES

(POWER, VIDEO, TWO-WAY AUDIO, CONTROL DATA AND TWO-WAY SECURITY/ FIRE ALARM SIGNALS)

12-Channel Multi-Function System - CI-12-ASP-DAASS

(support 12 cameras, up to 36W each, total output 84W)

- 12-Channel Signal Processor with built-in power supply, come with both RJ45 (8P8C) sockets and screw terminals for convenient wiring to 12 mixers/cameras
- Maximum power output to camera up to 36W
- Each channel can support multifunctional signals transmission
 - Power to Camera
 - Control Data to PTZ Camera
 - Video and Audio Signal from Mixer to Signal Processor with output to DVR for recording
 - Two-way fire/alarm trigger from Mixer to Signal Processor and vice versa
- Broadcast (Public Address) is available on Channel 12 with mixer PF300A12DAASS
- Special designed Distribution Board, each for connecting 4 cameras through one Cat.5e cable





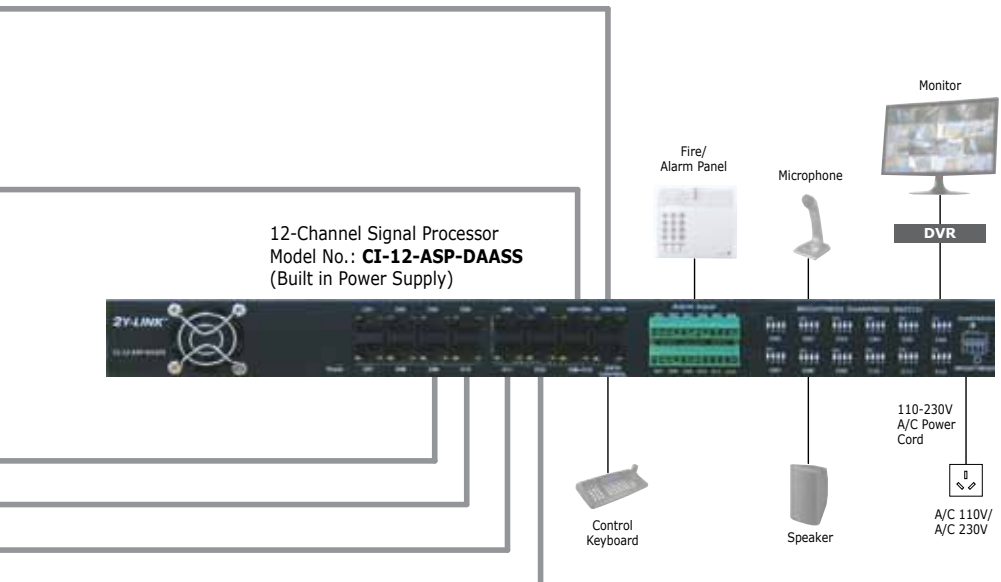
NEW 2012
ONE PAIR
 Bell Cable for Video,
 Power, Two-way Audio,
 Control Data &
 Security Fire/ Alarm Signals
 No separate power wire

Mixers can be used

Push-Fit Mixer (up to 36W)

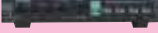
Model No.:	Description :
PF300A12DA	Power, Video, Control Data & Audio 12V DC, Up to 300m/ 990 ft
PF300A12ASS	Power, Video, Audio & Two way Alarm Signals 12V DC, Up to 300m/ 990 ft
PF300A12DASS	Power, Video, Control Data , Audio & Two-way Alarm Signals 12V DC, Up to 300m/ 990 ft
PF300A12DAASS	Power, Video, Control Data , Two-way Audio & Two-way Alarm Signals 12V DC, Up to 300m/ 990 ft

* Power distance, please refer to User Manual



2Y-LINK® PRODUCTS Selection Guide

		Power & Video Series			
		 			
Signal Processor		CI-16-ASP-485 16-Channel Signal Processor with built in Power Supply	CI-04-ASP-485 4-Channel Signal Processor with Data (RS485)	CI-04-ASP 4-Channel Signal Processor	CI-01-ASP Single Channel Signal Processor
Mixer / PSU Adaptor					
4W	UC-MX12V (DC12V, up to 500m/ 1650 ft)				
	PT068A12 (DC12V, up to 500m/ 1650 ft)		⊙	⊙	⊙
8W	PT068B12 (DC12V, 500-1000m/ 1650-3300 ft)		⊙	⊙	⊙
	PT068C12 (1000-1500m/ 3300-4950 ft)		⊙	⊙	⊙
	PF068A12 (DC12V, up to 500m/ 1650 ft)		⊙	⊙	⊙
	PF068B12 (DC12V, 500-1000m/ 1650-3300 ft)		⊙	⊙	⊙
	PF068C12 (1000-1500m/ 3300-4950 ft)		⊙	⊙	⊙
	PF068A24 (DC24V, up to 500m/ 1650 ft)		⊙	⊙	⊙
	PF068B24 (DC24V, 500-1000m/ 1650-3300 ft)		⊙	⊙	⊙
	PF068A12A (DC12V, up to 500m/ 1650 ft)				
	PF150A12D (DC12V, up to 500m/ 1650 ft)				
	PF300A12DA (DC12V, up to 300m/ 990 ft)				
36W	PF300A12ASS (DC12V, up to 300m/ 990 ft)				
	PF300A12DASS (DC12V, up to 300m/ 990 ft)				
	PF300A12DAASS (DC12V, up to 300m/ 990 ft)				
	SMP548V2A5 (Output : DC48V 2.5A)		⊙	⊙	⊙
PSU Adaptor	PS48V2A (Output : DC48V 2A)		⊙	⊙	⊙
	PS48V1A6 (Output : DC48V 1.65A)		⊙	⊙	⊙
	PS48V0A5 (Output : DC48V 420mA)				⊙
	PS32V1A (Output : DC32V 1A)				

	Power, Video & Audio Series 	Power, Video & Data Series 		Multi-Function Series 	
CI04-SP 4-Channel Signal Processor (Kit set) 	CI-04-ASP-A 4-Channel Signal Processor 	CI-04-ASP-DI 4-Channel Signal Processor 	CI-01-ASP-DI Single Channel Signal Processor 	CI-12-ASP-DAASS 12-Channel Signal Processor with built in Power Supply 	CI-01-ASP-DAASS Single Channel Signal Processor (Kit set) 
⊙					
	⊙	⊙	⊙		
	⊙	⊙	⊙		
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	⊙		⊙		⊙
⊙					

ACCESSORIES for Easy Installation

Power Supply Adaptor for 2Y-LINK®

- Supplies power for CCTV installation system, including Signal Processor and camera through Mixer

SMPS48V2A5 (Input – A/C110V ~ A/C 230V, Output – D/C 48V 2.5A)

PS48V2A (Input – A/C110V ~ A/C 230V, Output – D/C 48V 2A)

PS48V1A6 (Input – A/C110V ~ A/C 230V, Output – D/C 48V 1.65A)

PS48V0A5 (Input – A/C110V ~ A/C 230V, Output – D/C 48V 420mA)

PS32V1A (Input – A/C110V ~ A/C 230V, Output – D/C 32V 1A)



PVA-MIC 2Y-LINK® Microphone

- Suitable for all 2Y-LINK® Audio models (Power, Video & Audio Series and Multi-Function Series)
- Rating : Input – D/C 9~15V
Output - impedance 600ohm



DB-4RJ 1 x 4 Distribution Board with RJ45 (8C8P)

- Enables a single Cat.5e/6 cable to split into TWO, THREE or FOUR individual pairs of UTP, each pair to carry all Signals & Power for one camera (total FOUR cameras can be supported)
- Compact size to fit into standard junction/back box



DB-4PF 1 x 4 Distribution Board with Push Fit Terminals

- Enables a single Cat.5e/6 cable to split into TWO, THREE or FOUR individual pairs of bell (speaker) wires, each pair to carry all Signals & Power for one camera (total FOUR cameras can be supported)
- Compact size to fit into standard junction/back box



CC-1RJ 2-wire Cable Converter for RJ45

- For quick and easy connection of Cat.5e/6 cable with RJ45 plug to a 2-pole terminal block



CC-1PF 2-wire Cable Converter for Push Fit Terminal

- For quick and easy connection of a pair of bell (speaker) wires (via Push-Fit terminals) to a Cat.5e/6 cable with RJ45 plug



CC-2PF 2-wire Cable Converter for Push Fit Terminal

- For quick and easy connection of 2 pairs of bell (speaker) wires (via Push-Fit terminals) to a Cat.5e/6 cable with RJ45 plug
- Suitable for RS485 data connection and 2-wire connection



MIX-MP/ MIX-MP-USA Mixer Mounting Plate

- Suitable for all junction/back box
- For Push-Fit Terminal Mixers, including PF068A12, PF068B12, PF068C12, PF068A24 & PF068B24
- MIX-MP : 87W x 87H x 16D mm
- MIX-MP-USA : 75W x 120H x 7D mm



Model No.:
MIX-MP-USA



Model No.:
MIX-MP

PT-ISO Ground Loop Isolator with Pig Tail Cable

- Easy connection with Pig-Tail cable (BNC & DC plug)
- Eliminating ground loop problems caused by different power sources at camera and signal processor end
- Compact size and easy in-line installation



RM-04 Rack Mount Bracket

- For mounting one or two units of 4-Channel Signal Processor (CI-04-ASP-485, CI-04-ASP-DI & CI-04-ASP-A) in 19" rack



RM-16 Rack Mount Bracket

- For mounting Signal Processor CI-16-ASP-485 or CI-12-ASP-DAASS in 19" rack



PS-10KU Power Stabilizer

- Use with Push-Fit Mixer to improve stabilization of video quality by eliminating the effect of power fluctuation from camera



CUSTOM-DESIGNED PRODUCTS

The **2Y-LINK®** System can be custom-designed to enable transmission of **power and many multifunctional signals/data together simultaneously** through a **single pair of wires** to meet your required applications

Service Industry



Customer Service



Cash Exchange



Bank Teller

Facilities Industry



Lift Elevator



Building Automation Intercom



Stadium

Infrastructure Facilities



Airport



Highway



Railing



Tunnel



Mining



FIRE & SECURITY

CQR

FIRE & SECURITY

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